

Thought for the Day:

"The EPA said it is aware of 485 landfill gas projects in 44 states that together are collecting 85 billion cubic feet of gas and generating 12 billion kilowatt hours of electricity — roughly the same as an average U.S. nuclear power plant."

**House Energy and Technology Committee Hearing
519 House Office Building
HB 5334 - Tuesday, October 20, 2009, 9:00 a.m.
Testimony of Waste Management in support of HB 5334**

Mr. Chairman and Members of the Committee,

Good morning, my name is Tom Horton. I am Vice President of Midwest Public Affairs at Waste Management. Waste Management operates 16 landfills in Michigan in addition to transfer stations, collection companies and recycling facilities. The company is the largest recycler and provider of solid waste services in Michigan and across North America.

Landfill gas-to-energy projects provide dependable and steady base load power sources of renewable energy. Landfill gas powered energy is available throughout the operating life of a landfill and for a significant period of time after site closure. Waste Management has eight landfill gas to energy projects in Michigan. Four produce electricity, fed directly into the state's power grid. Two landfills power a GM and Ford plant, one pipes gas directly into the Natural gas grid and one supplies gas to power the energy needs for a Michigan based soy bean processor.

Waste Management supports HB5334.

First and foremost, I urge you to look at this legislation through the lens of your local communities. They view the 1995 yard waste ban as an unfunded mandate that annually costs Michigan communities millions of dollars to separately collect and dispose of yard waste. Local governments see HB5334 as a common sense idea in difficult financial times that returns control of managing yard waste to locally elected officials.

HB5334 places no yard waste handling requirements on local communities. They are free to continue separately collecting and composting yard waste if they determine that option best serves their residents. HB5334 gives municipalities the added option of picking up yard waste and trash together for deposit at a qualified energy production facility.

HB5334 Benefits local communities:

- 1. Return control of yard waste programs to local communities*
- 2. Save cities, townships and villages money by allowing them to eliminate separate collection of yard waste.*
- 3. Reduce the number of solid waste collection trucks picking up waste material.*
- 4. Eliminate the headaches and costs communities incur annually dealing with winter yard waste disposal issues.*
- 5. In addition to lowering municipal solid waste program costs, HB5334 will increase the amount of renewable energy produced in the state and cause a mini construction boom in landfill energy facilities. If HB5334 becomes law, companies like mine will spend tens of millions of dollars to construct new gas wells, piping systems and energy plants to comply with the bill's technical standards that require 70% of a landfill's gas production be converted to renewable energy.*

HB5334 is important because it recognizes, just as our solid waste policy states, that waste is a resource. We can unlock this resource and increase Michigan's production of renewable energy.

Critics of HB5334 may suggest the quantity of power produced from landfill gas is insignificant or the methodology is a step backwards in the hierarchy of solid waste processing. Nothing could be further from the truth. What this bill unlocks is the beginning of investment in a rapidly expanding world of green energy from waste. Legislation like HB5334 initiates an important first step in uncovering waste gasification's potential. The synthetic gas produced from the decomposition of waste can be turned into electrical energy, liquid fuels, industrial waxes and a host of other products that currently rely on petroleum for their creation.

Everyone recognizes that investment in wind and solar will lead to breakthroughs in supporting technologies like batteries and generators. These may be the key to developing affordable home sized units or concepts that allow these forms of power to reliably supply industrial facilities.

That's why early stage investment in all forms of renewable energy, including landfill gas, is so important. What that investment returns or how much power is produced today is not necessarily where we should focus our attention. Rather, we should understand that it will drive innovation and creativity in areas we can't yet define and from that innovation, changes will come, big changes too.

I'm already observing this beginning to happen from my position inside the solid waste industry. The renewable energy focus, driven by renewable energy portfolio standards, climate change initiatives and the country's desire to utilize petroleum alternatives, is driving innovation in a way not experienced before. The focus on utilizing landfill gas is a prime example. Until a relatively short time ago, landfill gas was flared or a portion might be used to generate electricity or meet thermal needs. It was pretty basic stuff.

Today, it is understood that landfill gas or synthetic gas from any form of waste destruction can be transformed (the miracle of chemistry) into a multitude of desirable energy products. With oil at today's prices, landfill gas can be economically converted to liquid natural gas, diesel fuel and fuel supplements.

The solid waste industry is investing in alternative processing technologies oriented around the gasification of waste products and the beneficial use of the resulting waste gas. Several of Waste Management's most important 2009 press releases related to gasification or alternative fuel production from waste. Some of these things are very futuristic and others are closer to the core of what we do already. Let me give you some examples.

One of the things the industry is working on is the development of liquid fuel from landfill gas. Through a joint venture with the LINDE Group, Waste Management built a plant that will convert landfill gas into liquefied natural gas (LNG) to be used as fuel for our trucks. This facility will be fully operational in November 2009, at the Altamont Landfill in Livermore, California. At full capacity, it will produce 13,000 gallons of fuel per day and power the 300 recycling and waste collection trucks we operate in the area. Diesel fuel consumption can be reduced by over four million gallons per year with a big impact on greenhouse gas emissions.

We've been working on a similar project at our Oklahoma City landfill to convert landfill gas into a cleaner burning diesel fuel for our trucks. After final testing, one of these fuel producing units is scheduled for installation in Michigan in 2010.

Last month, partnering with Valero Energy, Waste Management invested in a company named Terrabon to convert organic wastes into a high-octane transportation fuel. And earlier this year a joint venture with InEnTech was announced. This partnership will develop plasma gasification technology to process waste from the country's increasingly segmented commercial and industrial waste streams to produce a range of renewable energy and environmentally beneficial fuels and industrial products as well as generate electricity.

One of Waste Management's sustainability goals is tripling the amount of recyclables we manage. One way to do this is to recycle things we have never recycled before. We've actually developed a process, powered by landfill gas, to recycle old roof shingles into an asphalt product. We're piloting this concept right now in Austin, Texas, at the Williamson County Landfill. It is our intent to bring this technology to Michigan.

The point of sharing this with you is to emphasize that none of these concepts proved themselves commercially viable before we began investing in them. We continue to pour millions of dollars into their development because we are convinced that somewhere in the process we will discover the key to their commercialization and be able to scale up their ability to produce more of what they are intended to create.

HB5334 drives this kind of investment and technology development. Due to the 70% beneficial use requirement in HB5334 the landfill industry will be required to invest tens of millions of dollars in new facilities to remain compliant. This will drive technology and innovation in landfill gas projects as the industry seeks to maximize gas capture and energy production.

The same set of drivers that are causing so much investment to flow into gasification and alternative fuels will drive the way landfill gas projects will be developed under this piece of legislation and will open the door to a whole new wave of innovation surrounding the use of landfill gas. To me, this is why HB5334 is an important piece of legislation. It's not about the power it produces today; it's all about the power it will unleash in the future.

Thank you for the opportunity to share my thoughts with you.

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Closing Thought:

*A number of months ago, Congressman Gary Peters appeared on national television, in a combined effort with locally elected officials, to convince GM to retain the Orion Assembly plant in Oakland County. He stated, "GM should continue operating the Orion assembly plant for two reasons. It is located in the middle of the automotive supply chain and is **powered by green energy gas piped into the plant from the landfill across the street.** GM retained the Orion facility.....*

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HB5334 allows yard waste to be taken to landfills that have a landfill gas collection system in cells that receive yard waste and are designated as landfill energy production facilities (LEPF) by the Michigan Department of Environmental Quality (DEQ). The landfill maintains that designation by recovering and beneficially using a minimum of 70% of the site's annual gas production.

Bill Origination: A version of this legislation was introduced two years ago when Michigan adopted a Renewable Energy Portfolio Strategy (RPS) to expand the production and use of renewable energy. The state formally adopted its RPS and designated a number of energy sources, including landfill gas, as renewable energy sources. HB5334 evolved from that original debate and is designed to enhance the production and beneficial use of landfill gas.

Yard Waste is a Renewable Energy Benefit: Adding yard waste to landfills can increase the creation of renewable energy. Yard waste decomposes rapidly and contains a significant amount of moisture which helps other material in the waste mass decompose faster. As waste decomposition accelerates, the production and volume of landfill gas rises.

Community Choice: The legislation restores options for managing yard waste and gives communities control over determining what is best for their residents. Existing solid waste collection programs may continue without changes or communities can opt to end separate collection of yard waste and commingle the material with regular trash.

Community Benefits: Co-mingling yard waste and trash will reduce the number of collection trucks. Costs will be reduced, wear and tear on streets decline and truck exhaust emissions are lowered.

Winter Yard Waste problems eliminated: By allowing yard waste to be collected with trash and placed in landfill the headache of, "what to do with yard waste when yard waste collection programs are not operating" is eliminated.

Climate Change Impact: According to the report "Examining Increased Renewable Energy Production from Landfill Gas in Michigan (available at Public Sector Services website) requiring 70% collection efficiency before allowing gas-to-energy landfills to accept yard waste would likely result in a net statewide reduction of emissions from landfills.

Landfill Gas Projects are already helping power Michigan; Landfill gas-to-energy projects provide dependable and steady base load power sources of renewable energy. Landfill gas powered energy is available throughout the operating life of a landfill and for a significant period of time after site closure.. Waste Management has eight landfill gas to energy projects in Michigan. Four produce electricity, fed directly into the state's power grid. Two landfills power a GM and Ford plant, one pipes gas directly into the Natural gas grid and one supplies gas to power the energy needs for a Michigan based soy bean processor.

Impact on Landfill capacity: Allowing energy production facilities to accept yard waste will have marginal impact on overall landfill capacity while generating increased amounts of renewable energy due to yard waste's rapid decomposition rate. The impact is even less when yard waste is used for daily cover material in lieu of soil.